

Studies in Agricultural
Capital and Technology

Economics and Sociology
Occasional Paper No. 61

Changes in Small Farmer Credit Use in
Southern Brazil, 1965-69

by
Dale W Adams
and
Joseph L. Tommy

February 11, 1972

Department of Agricultural Economics and Rural Sociology
The Ohio State University
2120 Fyffe Road
Columbus, Ohio 43210

Changes in Small Farmer Credit Use in
Southern Brazil, 1965-69*

by

Da'le W Adams and Joseph L. Tommy**

In the past decade most countries in Latin America have increased substantially the amount of agricultural credit in their banking systems [1]. While the major purpose of the increase was to boost agricultural output, many policy makers also hoped that expanded credit would reach a large number of additional small-to-medium sized farm operators. Unfortunately, very little information is available on how the credit increases were allocated. This note is an attempt to shed light on this question. It summarizes the results of a study in Southern Brazil which was focused at determining the characteristics of farmers who received additional bank credit during the period 1965 to 1969. Information is also presented on changes in use of non-bank credit among farmers over the same period.

Data for the study were drawn from two sample surveys covering farm operation in 1965 and 1969 for 289 farms in Southern Brazil.^{1/} All of the units had 50 hectares or less of land (124 acres). The farms were located in four municipios (counties) in the states of Santa Catarina and Rio Grande do Sul. Principle economic activities on the farms included various mixed enterprises of corn, beans, rice, wheat, hogs and dairy.

* This study was supported by the Agency for International Development (AID) through a research contract on Rural Capital Formation and Technological Change. AID is not responsible for conclusions drawn in this paper.

** Professor and Research Assistant in Agricultural Economics, The Ohio State University.

^{1/} Additional background on the farms, survey techniques, etc. can be found in [4, 5].

During the years 1965 through 1969 Brazil vigorously increased bank credit for agriculture. In real terms bank credits for agriculture almost tripled. Nationwide, agricultural-credit-from-banks as a ratio of net-internal-product-from-agriculture increased from .12 in 1965 to .37 in 1969 [2]. Real interest rates charged on bank credit to agriculture were negative throughout the period; nominal interest rates ranged from 7 to 13 percent while rates of inflation exceeded 20 percent.

At first blush the farmers in the sample appear to have participated in a major way in the credit increase. As can be seen in Table 1, overall the 289 farms expanded their level of bank-credit use, valuewise, almost as rapidly as the national average. Bank credit used by the sample farms increased 2.4 fold in the five year period. Further analysis, nevertheless, strongly suggested that there was relatively little spread of the additional credit. In 1965, 49 percent of the farmers had bank loans. Despite the major increase in value of loans made to the group, the percent of farmers with loans from banks only increased to 56 percent by 1969. At this rate, a hundred percent increase in loan value only elicited a four percent increase in number of small farm borrowers.

The composite figures shown in the Table mask some changes in credit use. Of the 146 non-borrowers in 1965, about one-third (56) of these were receiving institutional credit in 1969. This was partially offset by a decrease of 37 in number of borrowers in 1965 who did not borrow in 1969. Overall about one-third of the farmers (90) were not associated with the institutional credit system in either year. Approximately another one-third (93) moved in and out of the credit system periodically. The remaining third of the farmers (106) appeared to be significant regular users of institutional credit.

Table 1 Institutional Borrowing by Size of Farm and Total Non-Institutional Borrowing for 1965 and 1969

Farm Size in Hectares ^{a/}	Total No. of Farms	1965			1969		
		Number of Credits ^{b/}	Borrowers	Value in 1965 \$NCr	Credits ^{b/}	Borrowers	Value in 1965 \$NCr ^{c/}
<u>Borrowings from Banks</u>							
Less Than 10.0	34	14	8	\$1,697	26	16	\$10,246
10.0-19.9	117	86	57	20,945	116	64	55,206
20.0-29.9	86	88	53	24,980	87	52	20,968
30.0-49.9	52	38	20	10,975	57	30	32,745
Totals	289	226	143	\$58,597	286	162	\$139,165
<u>Borrowings from Non-bank Sources</u>							
Totals	289	135	94	\$54,284	118	75	53,364

^{a/} Farms are classified by their 1965 size. One hectare equals 2.47 acres.

^{b/} Number of credits refers to total number of loans held by farmers during the year. Some farmers had as many as seven credits.

^{c/} The 1969 cruzeiro figures were deflated to 1965 prices using the unpublished index of prices-paid-by-farmers-for-purchased-inputs-in-São Paulo constructed by the Instituto do Economia, Secretaria da Agricultura, São Paulo: Base period 1948-52, 1965 = 7,513 and 1969 = 17,590.

An attempt was made in the study to identify farm characteristics which were associated with large increases in bank credit use. Farm size, enterprises included in the farm, and geographic location of the farm were the main characteristics analyzed. As can be noted in the Table, no clear pattern of changes in credit use emerged when loan data were arranged by farm size. Three of the four size groups sharply increased total loan value and also increased number of borrowers. One intermediate size group had an absolute decrease in number of borrowers as well as value borrowed from banks. Results from another study of 62 farms with more than 50 hectares of land which were also interviewed in 1965 and 1969 showed similar results [3]. Farmers who had absorbed a major part of the increased amount of credit were randomly sprinkled throughout the various farm sizes.

In the past few years Brazil has implemented several credit programs aimed at promoting various farm enterprises or input usage. Some of these programs, especially those directed at increasing wheat output, have been locational specific. Loan data from the 289 farms were arranged by type-of-farm and locations to see if these variables helped explain who received most of the increase in credit. Statistical tests of increases in credit uses by type-of-farm and location showed no significant differences. As with the farm size variable, these two variables gave no clear indication of who absorbed the additional credit.

A further attempt was made to clarify who participated in the increase in bank credit by classifying borrowers according to amounts of loans received in 1969. This showed that there were only 20 farmers, 7 percent of the 289, who borrowed four thousand New Cruzeiros or more from banks in 1969 (roughly one thousand dollars). In 1965 this group held 28 percent

of the total loan portfolio for all 289 farmers. This had increased to 44 percent by 1969. Overall these 20 farmers absorbed 55 percent of the increase in value of loans made to all 289 farmers over the five year period. Why these few were so favored was only partially explained by a review of information on these 20 farms. Several were intensive poultry or dairy producers whose size-of-farm was only a partial indication of size-of-business. Other operators were professionals with substantial financial interests outside the farm unit surveyed. In almost every case, however, these 20 borrowers appeared to be excellent credit risks.

Information on changes in non-institutional credit use among the sample farms for 1965 and 1969 is also shown in Table 1. This is credit provided outside formal banking channels by merchants, friends, relatives, etc. The decrease in real value of non-institutional loans held by the sample farms was a surprise. This, along with the sharp drop in number of borrowers of this type of credit, indicates that the large increase in bank credit pushed out some of the non-institutional credit. The small part, only 28 percent, which non-institutional credit played in 1969 in the total loan portfolio of the group analyzed also came as a surprise. Most people in Brazil have felt that non-institutional credit made up most of the loan portfolio of small-to-medium sized farmers in Brazil.

If the results reported in this study are representative, one must conclude that Brazil's massive credit buildup has reached very few new small borrowers. It also appears that heavily subsidized interest rates on bank credit for agriculture may be causing atrophy in the non-bank credit markets in rural areas.

The results of this study were inconclusive as to why certain farmers received major doses of credit while others did not. We feel, however,

that the traditional explanation which emphasizes the lack of demand for credit among non-borrowers should be seriously challenged. On the basis of this study plus other research underway in Southern Brazil, we conclude that a large number of small-to-medium sized farmers in Brazil have skills necessary to use credit and also have some profitable investment alternatives available. We conclude that much more attention must be paid to credit supply questions. Banks appear to be allocating credit to farmers largely on the criteria of who is in the best position to repay the loan. Inducing banks to loan in a more socially efficient manner appears to be a major challenge in Brazil as well as other Latin American countries.

REFERENCES

- 1) Adams, Dale W, "Agricultural Credit in Latin America: A Critical Review of External Funding Policy," American Journal of Agricultural Economics, Vol. 53, No. 2, May 1971, p. 163-172.
- 2) Adams, Dale W, Harlan Davis, and Lee Bettis, "Is Inexpensive Credit a Bargain for Small Farmers? The Recent Brazil Case," Economics and Sociology Occasional Paper No. 58, Department of Agricultural Economics and Rural Sociology, The Ohio State University, January 1972.
- 3) Adams, Dale W, William Simpson and Joseph Tommy, "Credit-Brazil," Research Note No. 8 on Capital Formation and Technological Change, Department of Agricultural Economics and Rural Sociology The Ohio State University, October 1971.
- 4) Rask, Norman, "Analysis of Agricultural Development Problems at the Farm Level: Methodology and General Farm Description," AFC No. 13, Department of Agricultural Economics and Rural Sociology, The Ohio State University, August 1968.
- 5) Tommy, Joseph Lissa, "Credit Use and Capital Formation on Small-to-Medium Sized Farms in Southern Brazil, 1965-1969," unpublished M.S. Thesis, Department of Agricultural Economics and Rural Sociology, The Ohio State University, 1971.